# A contribution to the Flora of Pacchaimalais, Tiruchirapalli District, Tamil Nadu

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(With a map)

### SITUATION AND PHYSICAL FEATURES

Tiruchirapalli is an inland district of Tamil Nadu, with an area of 14,281 sq km, and comprising the taluks of Tiruchirapalli, Karur, Kulithalai, Lalgudi, Musiri, Perambalur, Udayarpalayam, Alangudi, Kulathur and Thirumayam.

Forests occupy less than 7 per cent of the total area. Of this, the Pacchaimalais ('green hills') lying along the north-western border of the district and rising to 950 m account for the larger share. Irregular in outline, they have a maximum (north-south) length of 32 km. "In plan, the range has a very rude resemblance to an hour-glass in shape, being nearly cut in two by two ravines of great size and depth, opening to the northeast and southwest. Of the two parts thus formed, the northwestern is the larger, and has generally a higher level than the southeastern. Besides the rambling shape of the range, the most noteworthy and striking feature is the great steepness of the western slopes compared with those of the east, which are rarely precipitous, and are broken by sundry long buttress-like spurs, projecting far into the low country" (King & Foote 1864). The total area is 480 sq km of which 274 are in the Tiruchirapalli district, and 206 in the Salem district. The entire southern slopes and parts of the eastern and western slopes fall within the Musiri taluk of the Tiruchirapalli district. The Pacchaimalais of the Tiruchirapalli district are separated from the Kollimalais of the Salem district by the narrow Thammampatty valley.

Situated 70 km from the town of Tiruchirapalli and at the foothills of the Pacchaimalais is the small village of Sobanapuram. At the centre of the plateau of the Pacchaimalais is the village of Top Sengattupatty, with an Inspection Bungalow the only place suitable for camping on the

<sup>&</sup>lt;sup>1</sup> Accepted March 1971.

plateau. The two villages are connected by a 10 km bridle path, now being replaced by a motorable road.

Soil: The rocks are geneissic, with pockets of cretaceous sedimentary deposits. The soil varies in texture from sandy loam to loam. On the slopes it is dry, stony, poor in humus, and even less than 1 m deep, while the plateau has deep sandy loam with a good admixture of humus. There has been considerable erosion, accelerated by various forms of mismanagement like overexploitation, overgrazing, or even destruction of forests for shifting cultivation.

Climate: Whereas the district as a whole is characterized by a warm climate with low humidity, the Pacchaimalais have a relatively moderate climate owing to altitude and vegetation.

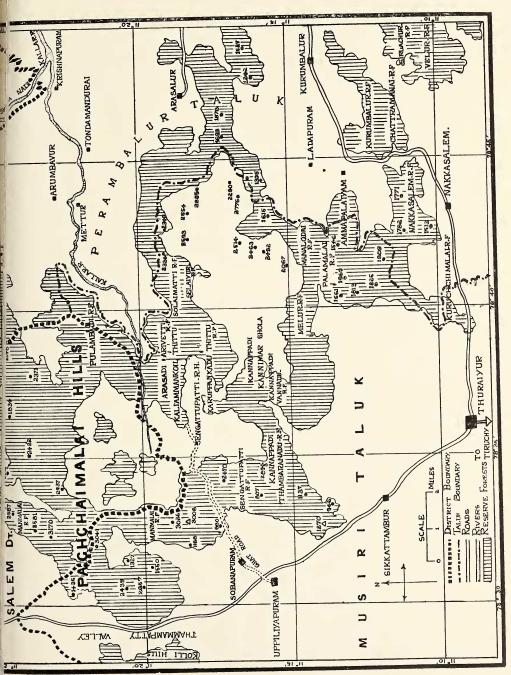
More than half of the mean annual rainfall of about 130 cm is received during the northeastern monsoon in October-November. The southwest monsoon is generally light; occasional summer showers also occur. The plateau is said to be malarial.

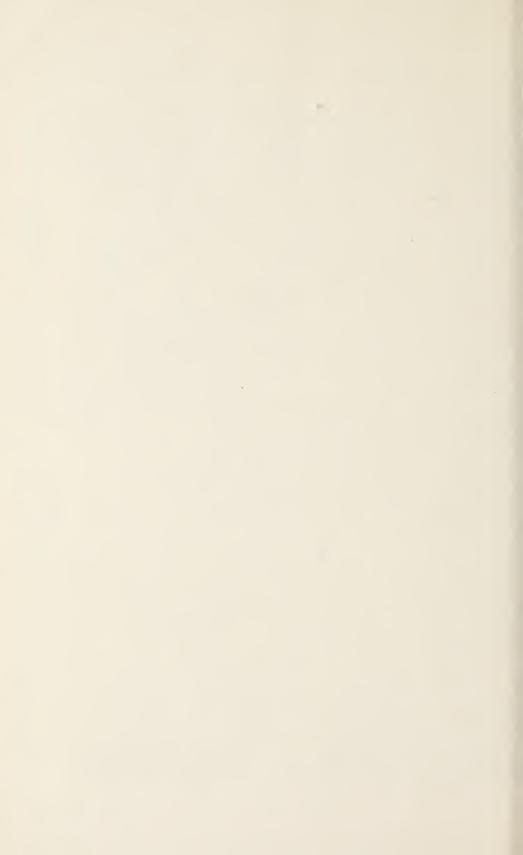
People: The portion of the Pacchaimalais within the Tiruchirapalli district has three nadus or groups of villages—Vannadu with 19 villages, Tanparanadu with 16 and Kambainadu with 13. The inhabitants are 'Malaiyalees' ('hill men'). Agriculturists of the hills (cultivating just the mere essentials of subsistence like cereals and pulses), sparsely dressed, speaking a dialect of Tamil, these people are a well-knit group, with their own family, social and religious customs and agricultural practices. Education or anything like modern amenities have scarcely reached them; their only contact with the outside world is the weekly trek down the hills to the plains for marketing. The general shyness of these people hides a great store of unassumed friendliness. Sociologists will find the habits, customs and community organization worth study.

Vegetation: The forests are of the Southern Tropical Dry Deciduous (Champion 1961) type. Below 450 m the forests, within easy access of the villages around, are much degraded owing to heavy grazing or random fellings. The vegetation is rather sparse and regeneration poor. Among the more dominant species are Acacia leucophloea, Chloroxylon swietenia, Dichrostachys cinerea, Erythroxylon monogynum, Zizyphus leucopyrus, Tamarindus indica, Randia dumetorum, Memecylon edule and Dodonea viscosa.

On the upper slopes, however, the forests are denser owing to better growth conditions and less interference; besides the species mentioned, are *Maba buxifolia*, *Murraya koenigii*, *Carissa spinarum*, *Elaeagnus indica*, and *Scutia circumcissa*. Sandalwood is the main item of forest revenue in these forests. Bamboos are occasionally present; the few climbers are large and woody; ferns and epiphytes are scarce except at the higher altitudes.

Patches of Southern Subtropical Hills Forests occur in the plateau





areas of Karuppankadu Thittu and Sholamadevi, where annual rainfall exceeds 120 cm, and trees exceed 20 m tall, with a lower shrubby, mostly evergreen, layer.

There has been considerable human interference in the form of destruction of forests for shifting cultivation. One obvious consequence is the invasion of Lantana camara var. aculeata and Dodonea viscosa. Stachytarpheta urticaefolia is the most conspicuous weed of neglected gardens, where they form dense masses. Exotic ornamental species are scarce. The first plant colonizers on the motor road under construction are Tridax, Vernonia, Tephrosia, Corchorus, Dolichos, Ipomoea, Sida and several species of grasses.

The crops of the plateau consist of cereals like Oryza sativa, Pennisetum typhoides, Sorghum vulgare, Eleusine corocana, Setaria italica, Panicum miliare, Paspalum scrobiculatum; pulses and vegetables like Dolichos lablab, Vigna sativa, Phaseolus mungo, Phaseolus radiatus, Dolichos biflorus, Brassica juncea, Capsicum annuum; and cash crops like Sesamum indicum. Coconut and bananas are seen around habitations.

The presence of some very old trees of *Terminalia* spp., *Artocarpus heterophyllus*, *Ficus bengalensis*, *Diospyros* spp. suggests that certain tracts of the interior have not been tampered with; even in the villages themselves, the scarcity of introduced species, of economic or aesthetic value, is noteworthy.

The Scope of the Present Exploration

The Pacchaimalais have so far not been exhaustively explored (Sebastine & Henry 1961) though the region does show certain interesting features. There are several species of restricted distribution that verge on the endemic; many more species are new records to the Tiruchirapalli district.

Ethnobotanical studies have considerable scope here on account of the intimate knowledge of plants possessed by the Malaiyalees. Deprived of modern medical amenities, these people depend on plants for medicines. The fact that each family seldom has more than a child or two, may suggest that the people depend on some plant of contraceptive value. Certain individuals in every village are known for their intimate knowledge of plants—in fact the author realized that such a Malaiyalee companion was indispensable for good field work. The local names and uses of plants given below are largely taken from data given by such a field assistant.

The distributional notes under each species are given under one of three headings: 'at the foothills' (chiefly around Sobanapuram), ('on the slopes' (ghats), and/or 'on the plateau' (chiefly at Top Sengattupatty, Karuppankadu Thittu, Kaliammankovil Thittu, Masimalaiyan

Thittu and Kannimar Shola). The notes refer to the actual places of collection *without* suggesting anything about the overall distribution of the species on the Pacchaimalais. The paper summarises the work of two collection trips—in December 1969 and July 1970. It is of a preliminary nature, reporting the first attempts towards an eventual *Flora* of the district.

Identification of the plants was done personally by me at the Madras Herbarium, Coimbatore. The collections are preserved in the Rapinat Herbarium, St. Joseph's College, Tiruchirapalli. The following enumeration consisting of 349 species from 269 genera belonging to 82 Families follows Gamble & Fischer (1956) for the order of the Families; genera and species are given in alphabetical order. Nomenclature has been brought up to date as far as possible; Tamil names, given in brackets closely following the botanical name, have generally been collected or verified in the field, failing which they have been taken from Seshagiri Rao & Krishnaswamy (1941).

#### ENUMERATION OF SPECIES

#### RANUNCULACEAE

Clematis gouriana Roxb. ex DC.

An extensive climber; leaves highly variable in shape; flowers white, in dense axillary or terminal panicles; common on the plateau.

Naravelia zevlanica DC.

On the upper slopes and on the plateau; usually spreading on thickets, etc.

#### MENISPERMACEAE

Cissampelos pareira L. (Appatta)

A tomentose climber; on the plateau.

Cyclaea peltata (Lamk.) Hook. f. & Th.

A climbing shrub with peltate leaves; on the plateau.

Diploclisia glaucescens (Bl.) Diels

A woody climber with small yellow flowers on the old stem; on the plateau.

Stephania japonica (Thunb.) Miers

A climber with small flowers in axillary umbels; on the plateau.

#### CAPPARACEAE

# Capparis sepiaria L. (Thoratti)

A large straggler with hooked thorns and small white flowers; the petals fall early; on the upper slopes and on the plateau.

#### VIOLACEAE

# Hybanthus enneaspermus (L.) F. Muell. (Orilaithamarai)

(Ionidium suffruticosum Ging)

A small herb with solitary pink flowers; along the slopes.

#### BIXACEAE

# Flacourtia indica (Burm. f.) Merr. (Sothaippallu; Sottaikala)

(F. sepiaria Roxb.)

A dense shrub with small green flowers; fruits said to be harmful to teeth; abundant on the plateau.

Scolopia crenata Clos.

An armed tree up to 8 m tall; flowers small, white, with spreading stamens and thick styles; abundant on the plateau.

### PITTOSPORACEAE

### Pittosporum floribundum Wt. & Arn. (Kattusampangi)

A tree up to 12 m tall, with white flowers in terminal panicles; on the plateau in the forests.

#### POLYGALACEAE

### Polygala javana DC.

Several branches from a woody base; flowers relatively large, pink; plants seldom seen entire owing to grazing; common on the slopes.

#### MALVACEAE

# Hibiscus vitifolius L. (Manithuthi)

A shrub with yellow flowers; on the plateau, near habitations.

### Malvastrum coromandelianum Garcke

A weed of wastelands on the plateau.

# Pavonia procumbens Boiss.

An undershrub with white flowers; on the slopes and on the plateau. **Pavonia zeylanica** Cav. (Mammatti)

An undershrub with pinkish flowers; on the slopes.

# Sida rhombifolia L. (Tenacham)

A shrub with yellow flowers; on the slopes and on the plateau.

# Urena lobata L. (Ottati)

A weed of wastelands; flowers pinkish.

### STERCULIACEAE

# Helicteres isora L. (Valambiri)

A tree up to 10 m tall, with red flowers and spirally twisted follicles; on the plateau.

# Pterospermum obtusifolium Wt. (Mulipolavu)

A small tree on the slopes; reported to be scarce by Gamble.

# Pterospermum xylocarpum (Gaertn.) Sant. & Wagh (Odupai)

(P. heyneanum Vahl)

A tree of the plateau forests; numerous seedlings as undergrowth. Waltheria indica L.

An undershrub with reddish stems and yellow flowers; one of the first colonizers on the freshly cut road.

#### TILIACEAE

### Corchorus? olitorius L. (Sanal; Peratti)

Robust specimens seen along the newly cut ghat road; not seen elsewhere.

### Corchorus tridens L.

Same as above.

Grewia disperma Rottl. ex Spreng. (Anaikkatimaram)

A small tree; fruit conspicuously 2-lobed, covered with golden tomentum.

Grewia emarginata Wt. & Arn.

A large shrub with leaves whitish on the undersurface:

Grewia flavescens Juss. (Karichili)

A small tree with yellowish flowers; on the slopes.

# Grewia orientalis L.

A shrub with long arching branches and white flowers; throughout the range.

# Grewia rhamnifolia Heyne

A tree; throughout the range.

Grewia tiliaefolia Vahl (Thadachi)

A tree of the plateau forests.

Grewia umbellifera Bedd.

A shrub up to 4 m tall; on the plateau.

#### LINACEAE

# Hugonia mystax L. (Mothirakkanni)

A straggling shrub with extensive branch system spreading on the trees; flowers bright yellow, showy, aggregated at the apices of branches; fruits red when ripe; on the slopes.

Erythroxylon monogynum Roxb. (Sembulichai)

A spreading shrub up to 3 m tall; flowers yellow; ripe fruits red; throughout the range.

#### MALPIGHIACEAE

Hiptage madablota Gaertn. (Kurukathi)

A woody straggler; leaves said to be used for smoking by the local people; on the plateau.

#### GERANIACEAE

### Oxalis corniculata L. (Puliyarai)

A diffuse creeper with yellow flowers; common on the plateau.

#### RUTACEAE

# Atalantia monophylla Correa (Kattu Elumichi)

An armed tree up to 12 m fall; on the plateau.

### Chloroxylon swietenia DC. (Vamparai)

A large shrub or small tree with pinnate leaves; the dehisced capsules persist for long; throughout the range.

### Clausena dentata (Wlild.) R. & S. (Aanai)

C. willdenovii Wt. & Arn.

A large shrub or small tree; aromatic leaves said to hasten the ripening of fruits like bananas in storage; on the plateau.

### Evodia lunu-ankenda (Gaertn.) Merr. (Kattushanbagam)

A densely foliaceous tree over 20 m tall, with copious flowers; on the plateau.

# Feronia limonia (L.) Swingle (Vilamaram)

F. elephantum Correa

Occasional trees on the plateau.

# Glycosmis cochinchinensis Pierre (Kulapanai)

A large shrub or small tree up to 5 m tall; on the slopes and on the plateau.

# Murraya koenigii (L.) Spr. (Karuveppilai)

A shrub with aromatic leaves used in cooking; one of the most dominant species on the plateau.

# Pleiospermium alatum (Wall. ex Wt. & Arn.) Swingle

Limonia alata Wt. & Arn.

A densely foliaceous tree with winged leaves; throughout the range. **Toddalia asiatica** Lam. (Milagaranai)

A prickly straggler with greenish flowers; on the plateau.

#### **OCHNACEAE**

# Ochna? squarrosa L. (Kalkuruvi)

A large shrub or small tree with yellow flowers; on the plateau.

### BURSERACEAE

# Commiphora caudata (Wt. & Arn.) Engl. (Pachaikkiluvai)

A large shrub or small tree, the thin bark flaking off exposing the green bark; on the slopes.

#### MELIACEAE

# Aglaia elaeagnoidea (Juss.) Benth. (Chokla)

A. roxburghiana Hiern.

A tree over 15 m tall, in the forests of the plateau.

# Cipadessa baccifera (Roth.) Miq. (Savattuchedi)

A shrub of the forest margins on the plateau.

Soymida febrifuga Juss. (Somadanam)

A tree over 12 m tall with large, ovate, woody capsules; planted at the Top Sengattupatty Rest House.

#### OLACACEAE

### Olax scandens Roxb. (Kadalranchi)

A thorny shrub with arching branches and yellowish flowers; at the foothills

#### **OPILIACEAE**

### Cansjera rheedii Gmel.

An armed shrub with arching branches and dark green leaves; on the plateau.

Opilia amentacea Roxb.

A straggler with pendulous racemes and oblong drupes.

#### CELASTRACEAE

# Celastrus paniculata Willd. (Manjakadi)

A straggler with crenulate leaves, and white flowers in pendulous panicles; throughout the range.

# Elaeodendron glaucum Pers. (Kanniramaram)

A tree of the plateau forests.

# Maytenus emarginata (Willd.) Ding Hou

Gymnosporia emarginata Laws.

A common shrub of the plateau; the thorns on the apical portions of shoots are longer, and bear leaves and flowers.

# Maytenus heyneana (Roth.) Raju & Babu

Gymnosporia heyneana Laws.

A woody shrub with woody thorns up to 3 cm long on the older stem; on the plateau.

#### RHAMNACEAE

# Sageretia filiformis (Roth.) Don

S. parviflora R. Br.

A shrub with arching branches; on the slopes.

Scutia circumcissa (L.f.) Druce (Kokkimullu)

S. myrtina Kurz

A strongly armed shrub abundant on the slopes.

Ventilago maderaspatana Gaertn. (Vennyangodi; Karadikkodi)

A climbing shrub; on the plateau.

Zizyphus oenoplia Mill. (Kattu Elanthai; Churaimullu)

A large, very thorny shrub; throughout the range.

Zizyphus xylopyrus Willd. (Kottai Ilanthai)

A tree of the foothills with velvety leaves when young and large fruits.

#### VITACEAE

Cayratia pedata (Vahl) Gagnep. (Kattupirandai)

A scandent shrub with pubescent leaves; on the plateau.

Cissus quadrangularis L. (Perandai)

The leaves are notably persistent; on the slopes.

Cissus vitiginea L.

A trailing shrub along the slopes.

Leea crispa L.

A shrub usually at the borders of forests, on the plateau.

#### SAPINDACEAE

Cardiospermum canescens Wall.

Mature capsules globose, not winged; on the plateau, not common.

Cardiospermum halicacabum L. (Modakkathan)

Mature capsules elongated, winged; at the foothills and on the slopes. **Dodonea viscosa** L.

Abundant in the forest clearings on the plateau.

Filicium decipiens Thw. (Athadali)

A densely foliaceous tree of the plateau forests.

Sapindus emarginatus Vahl (Naikottai)

A tree yielding fruits which are locally used as substitute for soap; throughout the range.

Schleichera oleosa (Lour.) Oken.

S. trijuga Willd.

A large tree over 30 m tall; on the plateau.

#### ANACARDIACEAE

Rhus mysorensis Heyne (Chippamaram; Sappula)

An armed, dense shrub with numerous arching branches and small, yellowish flowers.

#### MORINGACEAE

Moringa oleifera Lamk. (Murungai)

Planted near habitations on the plateau.

#### PAPILIONACEAE

Alysicarpus ? longifolius Wt. & Arn.

A stout undershrub with prominently veined leaves; along the slopes. Alysicarpus vaginalis (L.) DC. var. nummularifolia Baker

A herb of unweeded gardens, pasture lands, etc.; on the plateau. Atvlosia albicans Benth.

A twiner noted for the whitish foliage and large yellow flowers; abundant on the plateau.

Canavalia ensiformis DC. (Valavarai)

A twiner from the woody base; flowers purple; along the slopes and on the plateau.

Crotalaria medicaginea Lamk.

A low herb with rather showy yellow flowers; throughout the range. Crotalaria nana Burm.

A prostrate herb with small, yellow flowers; on the plateau, in pasture lands.

Dalbergia paniculata Roxb. (Porapatchalai)

A tree on the slopes; not common.

Desmodium gangeticum (L.) DC. (Pulladi)

An erect undershrub with lilac-tinged flowers; on the plateau.

Desmodium triflorum (L.) DC. (Sirupulladi)

A profusely branched creeping herb, rooting at the nodes, forming dense mats on the ground; flowers purple; on the plateau.

Dolichos falcatus Klein ex Willd.

A wiry twiner on the slopes and on the plateau; flowers yellow. Indigofera colutella (Burm. f.) Merr.

I. viscosa Lamk.

A branched subshrub along the slopes; flowers red.

Indigofera cordifolia Heyne

A prostrate herb conspicuous for the silky white foliage; abundant at the foothills.

Indigofera linifolia Retz.

A prostrate, well-branched herb; abundant at the foothills.

Mucuna atropurpurea DC. (Kakkavali)

A woody climber; pods covered with yellow to brown irritant bristles; pods 2-seeded; on the plateau.

Pongamia pinnata (L.) Pierre (Pungu)

P. glabra Vent.

A densely foliaceous tree, with tubercled bark; on the plateau.

Tephrosia hirta Ham.

An erect subshrub of the foothills and slopes.

Tephrosia tinctoria Pers.

A pubescent subshrub from a woody stock; flowers red; on the plateau.

Zornia gibbosa Span.

Z. diphylla (L.) Pers.

A diffuse herb with yellow flowers and prickly pods; foothills and slopes.

#### CAESALPINIACEAE

Bauhinia racemosa Lamk. (Athi)

A deciduous tree up to 10 m tall; common at the foothills.

Caesalpinia crista L. (Kalachikkai)

A very thorny, massive straggler with yellow flowers; along the slopes.

Caesalpinia decapetala (Roth.) Alst. (Putthadukki)

C. sepiaria Roxb.

A very pubescent thorny shrub ascending to several metres along nearby trees, etc.; flowers yellow; on the slopes and on the plateau.

Cassia auriculata L. (Aavaram)

A shrub less than 1 m tall; flowers bright yellow; common in open ground at the foothills. Plants in the areas are notably smaller than elsewhere in the district.

Cassia fistula L. (Sarakkonnai)

Stray trees on the plateau; apparently less luxuriant than in the plains.

Cassia occidentalis L. (Ponnavarai; Thagarai)

In wastelands near habitations on the plateau.

Cassia siamea Lamk. (Manjakkonnai)

A tree with bright yellow flowers and coppery pods; on the plateau. **Delonix regia** (Boj.) Raf. (Valnarayanamaram)

Stray trees near habitations on the plateau.

Pterolobium indicum A. Rich. (Karu Indu)

A very thorny straggler with white flowers and reddish young pods; really abundant at the foothills and along the slopes.

Tamarindus indica L. (Puli)

At the foothills, as an avenue tree.

#### MIMOSACEAE

Acacia chundra (Roxb.) Willd. (Karungali)

A. sundra DC.

A tree with copious yellowish flowers; very abundant at the foothills.

Acacia pennata (L.) Willd. (Vellai Indu)

A very thorny straggler with white flowers; common and abundant at the foothills.

Albizzia amara Boiv. (Usil)

A deciduous tree up to 10 m tall, with whitish flowers; foothills and slopes; pods used as substitute for soap.

Dichrostachys cinerea Wt. & Arn. (Vidathalam)

A thorny shrub or tree with spicate flowers pink below and yellow above; common at the foothills.

Mimosa pudica L. (Thottalsurungi)

Common wayside weed on the plateau.

Mimosa rubicaulis Lamk. (Kattusikkai)

A very thorny straggler, near fences; flowers pink.

#### CRASSULACEAE

Bryophyllum pinnatum Kurz. (Ranakkalli)

In moist, shady ground rich in humus; on the plateau.

#### COMBRETACEAE

Anogeissus latifolia Wall. (Vellainagai)

A large, deciduous tree; on the plateau.

Terminalia arjuna Wt. & Arn. (Vellamaruthu)

A large, usually buttressed tree, over 30 m tall; on the plateau, near rivulets.

Terminalia chebula Retz. (Kadukkai)

A large tree over 30 m tall, common in the forests of the plateau; fruits yield a local tanning material.

Terminalia paniculata Roth. (Pulavaimaram)

A large tree over 35 m tall, with dark corrugated bark, heavy horizontally spreading branches, and brown, winged fruits; on the plateau.

#### **MYRTACEAE**

Psidium guajava L.

Planted on the plateau.

Syzygium cumini (L.) Skeels (Navalmaram)

S. jambolanum DC.

A large tree over 25 m tall; near streams on the plateau.

#### LECYTHIDACEAE

Careya arborea Roxb. (Aamimaram)

A densely foliaceous tree up to 15 m tall; on the plateau.

#### MELASTOMATACEAE

Memecylon edule Roxb.

A large shrub or small tree with blue flowers and dark purple fruits; on the plateau.

Memecylon umbellatum Burm. f. (Kasamaram)

A shrub with yellowish leaves and small, yellow berries.

#### LYTHRACEAE

Ammannia baccifera L. (Neermael Neruppu)

In paddy fields; on the plateau.

#### ONAGRACEAE

Ludwigia octovalvis (Jacq.) Raven

Jussiaea suffruticosa L.

An erect, pubescent undershrub, with green stems; in marshy places on the plateau.

Ludwigia perennis L. Roxb.

L. parviflora

A decumbent, glabrous herb with purple stems, reddish leaves and yellow flowers; in the marsh on the plateau.

#### PASSIFLORACEAE

Passiflora calcarata Mast.

Along thickets, etc., on the plateau.

#### CUCURBITACEAE

Melothria heterophylla (Lour.) Cogn. (Pulivanji)

A climber with polymorphic leaves and striped fruits; on the plateau.

Momordica charantia L. (Pavai)

Near habitations on the plateau.

#### BEGONIACEAE

Begonia malabarica Lamk.

A branched, succulent herb up to 1 m tall, with white flowers, in the crevices of rocks in the shade, at higher altitudes on the plateau.

#### **AIZOACEAE**

Mollugo pentaphylla L. (Parpadagam)

On the slopes and on the plateau. This is the only species of the genus collected on these hills.

#### UMBELLIFERAE

Centella asiatica (L.) Urban (Vallarai) On the plateau, in pasturelands.

#### ARALIACEAE

Schefflera racemosa Harms. (Kanagi)

A large tree of the forests on the plateau.

Schefflera stellata Harms.

A straggler or a tree near rocks in the forests on the plateau.

#### ALANGIACEAE

A small tree, at times spinous; on the plateau.

Alangium salvifolium (L.f.) Wang. (Azhingimaram)

#### RUBIACEAE

Adina cordifolia (Roxb.) Hook. f. ex Brandis (Manjakkadambai) A tree of the plateau forests.

Borreria articulata (L.f.) F.N. Will. (Nathaichuri)

B. hispida (K. Schum.); Spermacoce hispida L.

A hispid, procumbent herb of pasturelands; throughout the range. Borreria ocymoides DC.

An erect herb with small white flowers; at the foothills.

Canthium dicoccum (Gaertn.) T. & B. (Naluvai; Nallamandaram) Plectronia didyma Kurz

An evergreen tree with shining leaves; on the plateau.

Knoxia sumatrensis (Retz.) DC.

K. corymbosa Willd.

An erect herb with lilac flowers; on the plateau; rather scarce.

Oldenlandia corymbosa L.

An erect herb with white flowers on long pedicels; in pasturelands on the plateau.

Pavetta indica L. var. montana Thw. (Kuttippilathi)

A large, bushy shrub with white flowers; good fodder for calves and lambs; on the slopes and on the plateau.

Pavetta indica L. var. tomentosa Hook. f.

In the forests of the plateau.

Plectronia parviflora Bedd. (Mullukkarai)

A thorny shrub; galls often present; on the plateau.

Randia dumetorum Lamk. (Karai)

A thorny shrub with white flowers; abundant at the foothills.

Randia malabarica Lamk. (Sirukarai)

An erect thorny shrub with fragrant, white flowers and red fruits;

on the slopes.

Tarena asiatica (L.) Alst. (Therani)

(Chomelia asiatica Kze.)

A large shrub with shining leaves, drying black; on the plateau.

Xeromphis spinosa (Thunb.) Keay

(Randia brandisii Gamb.)

A large shrub with prominently veined leaves; mature fruits 4 cm across; on the plateau.

#### COMPOSITAE

Acanthospermum hispidium DC. (Multhulasi)

A weed of wastelands, especially near habitations; on the plateau.

Ageratum convzoides L. (Poompillu)

A gregarious herb in unweeded gardens; heads white or violet; on the plateau.

Bidens pilosa L.

A weed of cultivation; on the plateau.

Blainvillea acmella (L.) Philipson

(B. rhomboidea Cass.)

A scabrid subshrub with white heads; on the plateau.

Blumea bifoliata DC.

A bushy herb in wasteland near habitations; rays yellow; on the plateau.

Blumea lacera DC. var. glandulosa Hook. f. (Narakkarandai)

A glandular hairy herb, abundant in unweeded gardens; heads yellow; on the plateau.

Eclipta prostrata (L.) L.

(E. alba Hassk.)

A herb of moist places; heads white; on the plateau.

Emilia sonchifolia (L.) DC. (Mulsevi)

A soft-pubescent herb of pasturelands, etc.; on the plateau.

Erigeron bonariensis L.

(E. linifolius Willd.; Conyza ambigua DC.)

An erect, sparsely branched herb of unweeded gardens; on the plateau.

Notonia grandiflora DC.

A robust shrub over 1 m tall, with yellowish heads; on the slopes, near rocks.

Siegesbeckia orientalis L.

A weed of wastelands near habitations.

Tridax procumbens L. (Vettukayachedi)

An abundant weed near cultivated places; throughout the range. **Vernonia cinerea** (L.) Less.

A common weed; heads pink turning white; throughout the range.

Vicoa indica (Willd.) DC. (Mookkuthippondu)

In unweeded gardens; heads yellow; on the plateau.

#### **MYRSINACEAE**

Ardisia solanacea (Poir.) Roxb. (Manipudpam)

A large shrub with coriaceous, shining leaves; in the plateau forests. Embelia basaal DC.

A large shrub with arching branches covered with numerous, large lenticels; on the plateau.

#### SAPOTACEAE

Madhuca longifolia (L.) Macbr. (Nattu Iluppai)

(Bassia longifolia L.)

A large and densely foliaceous tree over 40 m tall; on the plateau.

#### EBENACEAE

Diospyros ebenum Koenig

A medium-sized tree with woody fruits; in the plateau forests.

Diospyros ovalifolia Wt. (Vedukanari)

A small tree of the plateau forests.

Maba buxifolia Pers. (Kattuthovarai)

A shrub or small tree from half way up the ghats; one of the most abundant species of the plateau; occasional shrubs at the foothills.

#### **OLEACEAE**

Jasminum auriculatum Vahl (Udigai)

A climbing shrub with dense clusters of white, fragrant flowers; on the plateau.

Jasminum rigidum Zenk. (Oosimalligai)

In the forests of the slopes and of the plateau; flowers white.

Jasminum? trichotomum Heyne

A woody straggler; flowers white; throughout the range.

Ligustrum perrottetii DC.

A large shrub with white flowers; on the plateau.

Ligustrum roxburghii C. B. Cl.

A shrub up to 5 m tall, with white flowers; on the plateau.

Linociera intermedia Wt. (Musiladi)

A tree with white, fragrant flowers; on the plateau.

### APOCYNACEAE

Carissa spinarum L. (Sirukila)

A shrub with white flowers on the ziz-zag branches; one of the do-

minant species throughout the range.

Catharanthus pusillus (Murr.) Don (Milagaippoondu)

(Vinca pusilla Merr; Lochnera pusilla K. Schum.)

A glabrous annual herb with white flowers; in cultivated places on the plateau.

Catharanthus roseus (L.) Don (Kallaraippoo)

(Vinca rosea L.; Lochnera rosea Reichb.)

On the plateau; the white-flowered plants are far more numerous than the pink-flowered ones.

Ichnocarpus frutescens R. Br. (Manippilangodi)

A profusely branched, climbing shrub with rusty-tomentose branches; on the plateau.

Plumeria rubra forma acuminata Sant. & Irani ex Shah

(P. acuminata Ait.; P. rubra forma acutifolia (Ait.) Woods.)

Planted near a shrine on the plateau; petals white, with shades of yellow.

Wrightia tomentosa R. & S. (Tondampalai)

A small tree, tomentose on the younger branches; on the plateau.

#### ASCLEPIADACEAE

Asclepias curassavica L.

Stray plants along a stream on the plateau.

Cosmostigma racemosum Wt. (Vattuvalli)

A climber with yellowish flowers; on the plateau.

Cryptolepis buchanani R. & S.

A profusely branched shrub with copious latex, yellowish flowers and green pods; on the plateau.

Cryptolepis grandiflora Wt.

A climber; on the slopes.

Cynanchum pauciflorum R. Br.

A climber; on the plateau.

Dregea volubilis (L.f.) Benth. ex Hook. f. (Kudasappalai)

(Marsdenia volubilis (L.f.) Cooke)

A woody climber with green flowers; on the plateau.

Gymnema hirsutum Wt. & Arn.

A climber with spirally twisted stems; on the plateau.

Gymnema sylvestre (Retz.) Schult. (Sirukurinji)

A woody climber; on the slopes.

Hemidesmus indicus (L.) Schult. (Nannari)

At the foothills; flowers yellow.

Sarcostemma acidum (Roxb.) Voigt (Kodikkalli)

(S. brevistigma Wt. & Arn.)

The succulent green branches seen in masses on thickets, etc.; flo-

wers noted only at the foothills, not above.

Secamone emetica R. Br. (Aatangodi; Angaravalli)

A well branched, wiry twiner in dense masses from a woody base; on the plateau.

? Telosma pallida (Roxb.) Craib.

A twiner with watery latex; on the plateau.

Toxocarpus kleinii Wt. & Arn.

A slender, villous, twiner with yellowish flowers.

### LOGANIACEAE

Strychnos? potatorum L.f. (Thethankottai)

A densely foliaceous tree with numerous fruit-like galls; on the plateau.

### GENTIANACEAE

Exacum pedunculatum L.

A herb up to 15 cm tall; in moist ground; at the foothills.

### BORAGINACEAE

Cordia evolutior Gamb.

A tree up to 6 m tall, with yellow drupes; on the slopes. Cordia wallichii Don (Namavirai)

A tree up to 10 m tall; fruits yellowish; on the plateau.

Cynoglossum furcatum Wall.

A herb up to 1 m tall with bluish flowers on slender, elongate racemes.

Ehretia ? laevis Roxb. (Aadali)

A tree up to 10 m tall; flowers white; on the slopes and on the plateau.

#### CONVOLVULACEAE

Argyreia kleiniana (R. & S.) Raiz.

(A. bracteata Choisy)

A large climber noted for the showy, pink flowers and masses of persistent bracts; on the slopes and on the plateau.

Evolvulus alsinoides L. (Vishnukiranthi)

Common in open ground on the plateau.

Ipomoea obscura Ker.-Gawl. (Thalikodi)

A twining herb with delicate, yellowish corolla 1 cm across; on the slopes and on the plateau.

Ipomoea staphylina R. & S. (Ononkodi)

A massive climber with white flowers, dark purple in the tube; on

the slopes.

### Rivea hypocrateriformis Choisy

A twiner on wayside thickets, etc.; at the foothills.

#### SOLANACEAE

### Datura fastuosa L. (Oomathai)

Stems dark purple, somewhat succulent; in wastelands near habitations on the plateau.

### Physalis peruviana L.

Plants found as new colonizers along the newly made ghat road.

# Solanum giganteum Jacq.

A large shrub, white tomentose on the younger parts; flowers white; on the plateau.

# Solanum khasianum Cl. var. chatterjianum Sengupta

A wayside subshrub; on the plateau.

# Solanum nigrum L.

An annual herb with small, white flowers; on the plateau.

### Solanum torvum Swartz (Sundai)

A shrub of open places on the plateau; flowers white.

### Solanum verbascifolium L. (Malaichundai)

A large shrub or small tree, usually along fences; flowers white; on the plateau.

#### SCROPHULARIACEAE

# Bacopa monnieri (L.) Penn. (Neerpirami)

(Moniera cuneifolia Michx.)

In marshy land on the plateau; flowers violet; opening by 9.30 a.m. **Ilysanthes oppositifolia** Urban

In perennially moist ground on the plateau; flowers violet.

# Limnophila ? rugosa (Roth.) Merr.

Notably robust specimens gregarious in marsh on the plateau; corolla purple.

# Lindernia ciliata (Colsm.) Penn.

(Ilysanthes serrata Urban)

Abundant in marsh on the plateau; corolla purplish with a yellow blotch on the lower lip.

# Lindernia crustacea (L.) F. Muell.

(Vandellia crustacea Benth.)

In pasturelands and unweeded gardens on the plateau.

# Striga angustifolia (Don) Sald.

(S. euphrasioides (Vahl) Benth.)

Parasitic on Pennisteum typoides; flowers white; on the plateau.

Striga asiatica (L.) Kze.

Stray plants along the slopes; flowers white.

#### LENTIBULARIACEAE

### Utricularia caerulea L.

In perennially moist ground; flowers purplish.

Utricularia ? graminifolia Vahl-

On moist rocks along a stream on the plateau; flowers violet. ACANTHACEAE

Andrographis alata (Vahl) Nees

An erect herb on the floor of the plateau forests; stems angular, almost winged at the apices.

Andrographis elongata T. And.

A herb with white corolla and purple stamens; at the foothills and on the slopes.

Asystasia gangetica T. And. (Meddaikkeerai)

A straggling and spreading herb along thickets, etc.; flowers purplish, on the plateau.

Barleria pilosa Wall.

An undershrub of the slopes with large crowded bracts.

Barleria prionitis L. (Kattu Kanagambaram)

An armed shrub with yellow flowers; very common along the ghats. Dicliptera cuneata Nees

A branched herb with pink flowers; on the plateau.

Dipteracanthus prostratus (Poir.) Nees (Pottakanchi)

(Ruellia prostrata Poir.)

A diffuse, spreading subshrub with axillary flowers; corolla violet, falling off easily; on the plateau.

Ecbolium viride (Forsk.) Alst.

(E. linneanum Kurz)

A shrub with bluish flowers, and bracts purple along the margins; along the slopes.

Eranthemum capense L.

(E. montanum Roxb.)

A shrub up to 1 m tall, with blue flowers; on the plateau. Justicia glauca Rottl.

A herb rather variable in size; flowers pink; on the slopes.

Justicia quinqueangularis Koen.

An undershrub with ascending branches; along bunds of paddy fields on the plateau.

Justicia simplex Don

A pubescent herb with small pink flowers; along the bunds of paddy fields on the plateau.

# Phlebophyllum? versicolor (Wt.) Brem.

(Strobilanthes? cuspidatus T. And.)

A gregarious shrub over 1 m tall; leaves white, on the undersurface; flowers not seen; sparse on the slopes, abundant on the plateau.

Strobilanthes? micranthus Wt. (Korakkuthazhai)

An erect shrub with leaves green throughout; flowers not seen; gregarious in patches in the plateau forests.

Thunbergia fragrans Roxb. var. vestita C. B. Cl.

A tomentose twiner with white flowers 3 cm across; on the plateau. Verbenaceae

Gmelina asiatica L. (Nilakkumil)

An erect shrub with golden yellow flowers; at the foothills.

Lantana camara var. aculeata (L.) Mold. (Arippu; Unni)

Only stray plants along the slopes; on the plateau it is almost non-existent in the forest, whereas it forms dense masses in the cleared areas; flowers pinkish; generally in fruit in July.

Lantana indica Roxb.

An erect shrub over 1 m tall with pinkish flowers; on the plateau. **Phyla nudiflora** (L.) Greene (Poduthalai)

(Lippia nodiflora Mich.)

A prostrate herb rooting at the nodes; on the plateau in pasturelands.

Premna corymbosa Rottl. & Willd. (Munnaikkeerai)

A shrub over 1 m tall with spreading branches; on the plateau.

Premna tomentosa Willd. (Podaganari)

A small tree, densely tomentose on the younger parts; on the plateau.

Stachytarpheta urticaefolia (Salisb.) Sims (Seemainayuruvi)

(S. indica Valıl)

Stray plants on the slopes, over 50 cm tall; abundant and gregarious in unweeded gardens on the plateau but the plants are smaller; flowers blue to purple; one of the most abundant weeds of the plateau. Svensonia hyderabadensis (Walp.) Mold. (Naranjedi)

(Bouchea hyderabadensis Walp.)

Plants even up to 3 m tall, with pink flowers; at Masimalaiyanthittu, inside forests, on the plateau; said to be restricted in distribution.

Symphorema involucratum Roxb.

A shrub with arching branches; on the plateau.

Vitex altissima L. f. (Mayiladi)

A tree over 20 m tall, with violetish flowers; fairly common in the forests of the plateau.

Vitex negundo L. (Nochi)

A shrub with purple flowers; along streams, near villages, etc.; on the plateau.

#### LABIATAE

Anisomeles indica (L.) Kze. (Vattapeimarutti)

Shrubby, over 1 m tall; at the foothills.

Leucas biflora R. Br. var. procumbens Gamb.

On the floor of the forests of the plateau; less on the slopes; flowers white.

Leucas lanata Benth.

Erect shrub with branches spreading to over 1 m; on the plateau, in thickets.

Leucas lavandulaefolia Rees

(S. linifolia Spr.)

An erect herb of wastelands; particularly abundant near cultivated places; on the plateau.

Ocimum adscendens Willd.

A branched herb; flowers with purple calyx and white corolla; along the slopes.

Orthosiphon glabratus Benth.

A branched herb; along the slopes.

#### NYCTAGINACEAE

Boerhaavia diffusa L. (Sattaranai)

Several procumbent branches from a stout rootstock; along the slopes.

#### AMARANTHACEAE

Amaranthus viridis L. (Kuppaikkeerai)

In wastelands near habitations; on the plateau.

Celosia argentea L. (Pannaikkeerai)

An erect herb up to 1 m tall, near cultivation; flowers pinkish; on the plateau.

#### CHENOPODIACEAE

Basella rubra L. (Sirupasali)

A glabrous, succulent twiner, with reddish spicate inflorescence; on the plateau.

Chenopodium ambrosioides L.

In wastelands near habitations; plants strongly scented; on the plateau.

#### ARISTOLOCHIACEAE

Aristolochia indica L. (Isuramuli)

A perennial twiner; perianth with shades of yellow and green, tinged purple; on the plateau.

#### **PIPERACEAE**

Peperomia dindigulensis Miq.

A succulent herb with pinkish stems; on moist rocks in the shade, on the plateau.

Piper attenuatum Buch.-Ham.

On the plateau.

#### LAURACEAE

Cassytha filiformis L. (Erumaikkottam)

At the foothills; parasitic, without any host specificity.

Cinnamomum? iners Reinw.

A tree with large, coriaceous, shining leaves; on the plateau.

Litsaea deccanensis Gamb.

A tree with grey branches and rusty tomentose buds; on the plateau.

#### ELAEAGNACEAE

Elaeagnus indica Ser.

A straggler with arching branches; undersurface of leaves white-tomentose; common, even abundant, in and around the forests on the plateau.

#### LORANTHACEAE

Dendrophthoe falcata (L. f.) Etting (Pulluruvi)

(Loranthus longiflorus Desv. var. falcatus Kurz)

A densely branched parasite with yellow perianth and reddish stamens; at the foothills; on a variety of hosts.

Helicanthus elastica (Desr.) Danser (Andagan)

(Loranthus elasticus Desv.)

Perianth white at the base, green on the lobes; filaments red; on the plateau.

Loranthus? courtallensis Gamb.

On the plateau.

Loranthus? recurvus Wall.

On the plateau.

Scurrula cordifolia (Wall.) Don

(Loranthus cordifolius Wall.)

A massive parasite with rusty-tomentose foliage and orange-yellow flowers with short perianth tube; on the plateau.

Viscum orientale Willd.

On the plateau; no host specificity.

Viscum ramosissimum Wall. (Ottu)

Parasitic on Dendrophthoe falcata itself parasitic on Zizyphus; at the foothills.

#### SANTALACEAE

Santalum album L. (Santhanam)

The most important source of forest revenue from the district, the bulk of which comes from the Pacchaimalais; several trees are affected by the "spike" disease; throughout the range.

#### EUPHORBIACEAE

Acalypha fruticosa Forsk. (Chinni)

A well branched shrub; along the slopes.

Antidesma zeylanicum Lamk. (Nolaidali)

A tree up to 8 m tall, with the tender parts rusty-tomentose, and fruits red.

Bridelia roxburghiana Gehrm.

A tree of the plateau forests.

Cleistanthus collinus (Roxb.) Benth. ex Hook. f. (Oduvan)

A large shrub or small tree up to 5 m tall with capsules up to 3 cm across; one morsel of ground leaves or the rind of the capsules said to be lethal; said to be used for suicide by the hill tribes; throughout the range.

Dalechampia indica Wt.

A twiner with large bracts and glandular calyx; on the slopes.

Emblica officinalis Gaertn. (Nellikkaimaram)

Occasional trees on the plateau; fruits few.

Euphorbia hirta L. (Ammanpaccharisi)

In the pasturelands; throughout the range.

Givotia rottleriformis Griff. (Boothalai)

A tree over 20 m tall; leaves densely white tomentose on the undersurface; fruits with a hard shell, covered with fluffy tomentum; on the slopes.

Jatropha curcas L. (Kattamanakku)

Along hedges; throughout the range.

Kirganelia reticulata (Poir.) Baill. (Neerpalai)

A shrub, usually near streams; on the plateau.

Mallotus philippinensis (Lamk.) Muell.-Arg. (Kapilapodi)

In dense groups in cleared lands where it seems to be a colonizer; on the plateau.

Melanthesa turbinata (Koen. ex Roxb.) Oken

(Brevnia patens Rolfe)

A shrub over 1 m tall; on the plateau.

Phyllanthus fraternus Webster (Keezhanelli)

(P. niruri auct., non L.)

A delicate herb in wastelands; throughout the range.

Phyllanthus gardnerianus Baill.

Several branches from a woody rootstock; in pasturelands on the plateau.

Phyllanthus maderaspatensis L.

A decumbent herb; at the foothills.

Phyllanthus polyphyllus Willd. (Keelanelli)

A tree resembling Emblica officinalis in habit; on the plateau.

Phyllanthus urinaria L. (Shivappunelli)

A herb with creeping branches; leaves and fruits reddish; on the plateau.

Sebastiania chamaelea Muell.-Arg.

A weed of pasturelands; fruits reddish.

Securinega virosa (Roxb. ex Willd.) Pax & Hoffm. (Pula; Veppulathi) (Fluggea virosa Baill.)

A large shrub with minute flowers; on the plateau.

Tragia involucrata L. (Canchori)

A twiner with stinging bristles; on the plateau.

#### ULMACEAE

Celtis wightii Planch. (Vellaithovarai)

A densely foliaceous tree up to 10 m tall, with solitary fruits; on the slopes and on the plateau.

Holoptelea intergrifolia (Roxb.) Planch. (Aavili)

A tree up to 12 m tall; on the plateau.

Trema orientalis (L.) Bl. (Amparuthi)

A tree of the plateau forest borders.

#### MORACEAE

Artocarpus heterophyllus Lamk. (Pila)

(A. integrifolia L.)

Found in cultivation, and probably also wild.

Ficus benghalensis L. (Aalamaram)

Occasional trees throughout the range.

Ficus hispida L. f. (Peiyathi)

A tree up to 10 m tall, without aerial roots; tender parts hispid; throughout the range.

Ficus ? luscens Bl. (Malai Ichi)

(F. ? infectoria Roxb.)

A large tree over 30 m tall, with heavy, horizontal branches; near

habitations, on the plateau.

Ficus mysorensis Heyne (Kal Aal)

A large tree with copious foliage; on the plateau.

Plecospermum spinosum Trec. (Koratti)

A large shrub with numerous arching branches, with conspicuous thorns all over; on the slopes and on the plateau.

Streblus asper Lour. (Parungu; Piramaram)

A large shrub or small tree; on the plateau; said to be locally used

for decorations on festive occasions.

Streblus taxoides (Hevne ex Roth.) Kurz

(Phyllochlamys spinosa Bur.)

An armed shrub up to 3 m tall; very abundant in the forests of the plateau.

#### **GNETACEAE**

Gnetum ual Brongn. (Karunjaraikkodi)

Fairly common in the forests of the plateau; the vernacular name refers to the use of the stems as ropes.

#### ORCHIDACEAE

Cymbidium aloifolium Sw.

Epiphytic; flowers brownish red; on the plateau.

Eulophia epidendracea Fischer

Terrestrial; perianth green but for the white lip; on the slopes.

Habenaria plantaginea Lindl.

Terrestrial; leaves 3-4, spreading on the ground; flowers white; in moist, shady ground on the plateau.

Habenaria viridiflora R. Br.

In marshy ground; flowers green; on the plateau.

Hetaeria? ovalifolia Benth.

Terrestrial; abundant in moist, shady places, in humus; on the plateau.

Vanda parviflora Lindl.

Epiphytic; on the plateau.

Vanda spathulata Spreng.

Usually terrestrial initially, but epiphytic later; shoots showing up conspicuously above the thickets, especially during flowering; on the plateau.

#### HYPOXIDACEAE

Curculigo orchioides Gaertn. (Nilappanai Kizhangu)

An acaulescent, ground herb with bright yellow flowers; very abundant in pasturelands on the plateau.

#### DIOSCOREACEAE

Dioscorea ? esculenta Burk. (Musilamvalli Kizhangu)

A climber from a tuberous rootstock, found all over the plateau; the rhizomes are eaten, even raw, by the local people.

#### LILIACEAE

Asparagus ? racemosus Willd. (Seemai Sadaveri)

On the plateau.

Gloriosa superba L. (Kalappai Kizhangu)

Throughout the range; not too common.

Sansevieria roxburghiana Schult. f. (Marul)

Acaulescent; rootstock creeping; flowers white, along a scape up to 1 m tall; at the foothills.

Scilla hyacinthina (Roth.) Macbr. (Sirunari Vengayam)

(S. indica Baker)

A scapigerous herb with tunicate bulbs and leaves with black blotches; flowers purple; at the foothills.

Smilax zeylanica L. (Malaithamarai)

On the plateau.

#### PONTEDERIACEAE

Monochoria vaginalis Presl.

In marsh, paddy fields, etc.; flowers blue; on the plateau.

#### COMMELINACEAE

Commelina benghalensis L. (Kanavazhai)

In shady places, along the bunds of paddy fields, etc.; perianth blue; on the plateau.

Commelina paludosa Bl.

(C. obliqua Ham.)

The uniformly white perianth seems to be characteristic of the plateau.

Commelina paleata Hassk.

On the plateau; perianth blue.

#### **TYPHACEAE**

Typha angustata Bory & Chaub. (Jambu)

Plants stunted, scarcely exceeding 1 m tall; along a rivulet at Sob-anapuram, at the foothills.

#### ARACEAE

Acorus calamus L. (Vasambu)

Gregarious in marsh at Sembur, on the plateau.

Colocasia esculenta (L.) Schott.

(C. antiquorum Schott.)

Gregarious, in marsh; petioles dark purple; leaves up to  $50 \times 50$  cm; spathe yellow.

#### CYPERACEAE

Bulbostylis barbata Kunth

On the slopes.

Cyperus eleusinoides Kunth

Robust plants in marsh on the plateau.

Cyperus haspan L.

Culms even over 1 m tall; in stagnant water on the plateau.

Cyperus sanguinolentus Nees

In marshy land; spikelets green; on the plateau.

Fimbristylis bisumbellata Bub.

In marshy ground; on the plateau.

Fimbristylis dichotoma Vahl

On the plateau, in marshy land.

Fimbristylis miliacea Vahl

On the plateau, in marshy land.

Fimbristylis spathacea Roth.

On the plateau.

Fimbristylis tetragona R. Br.

Culms ash-coloured, in dense clusters in marshy ground; on the plateau.

Kyllinga sp.

Along the bunds of paddy fields; on the plateau.

Pycreus globosus Reichb.

On the plateau in wastelands.

Pycreus puncticulatus Nees

On the plateau.

Scirpus erectus Poir.

Gregarious in marshy places on the plateau.

#### GRAMINEAE

Apluda mutica L.

(A. aristata L.)

Culms exceeding 1 m tall, scrambling along thickets; on the plateau.

Arachne racemosa (Heyne) Ohwi (Eleusine verticillata Roxb.)

Robust specimens along the freshly cut ghat road.

Aristida depressa Retz.